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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,045	07/13/2005	Hendrik Wermter	PP/15-22821/A/CGM 520/PCT	8680
324 7590 11/19/2008 JoAnn Villamizar Ciba Corporation/Patent Department 540 White Plains Road P.O. Box 2005 Tarrytown, NY 10591				
EXAMINER				
WYROZEDSKI LEE, KATARZYNA I				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
11/19/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/542,045

## Applicant(s)

WERMTER ET AL.

## Examiner

Katarzyna Wyrozebski

## Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 11-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

In view of applicant's amendment and response dated 8/8/2008 following office action is final as necessitated by amendment. Applicants amendment deleted from the scope of the claims anhydride functionality, which was previously suitable for use in the composition. Currently the applicants have amended claims to incorporated limitation of epoxy compounds, which amendment completely changes not only scope of the invention but also the nature of the polymeric composition. As a result search was updated to reflect the amendment, where the functional compound is based on epoxy, since the amendment necessitated new grounds of rejection.

*Note – claim 3 is redundant since terms phyllosilicate and layered silicate clay are one and the same. In fact terms are utilized interchangeably. The claim will have to be addressed before application is allowed.*

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-8, 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over FUMITOSHI (JP 04-68133 as provided by the applicants) in view of TON THAT (US 7,220,484).

The prior art of FUMITOSHI discloses composition for polyolefins comprising following components as depicted in claim 1 of the prior art:

- a) a synthetic polyolefin resin
- b) inorganic filler
- c) phenolic antioxidant
- d) sulfur containing antioxidant
- e) nitrogen containing antioxidant
- f) bisphenol A multiglycidyl ether componet as shown in formula F-1, where there are two glycidyl units.

According to claim 2 of FUMITOSHI amounts of the additives are based on the 100 parts by weight of resin, wherein

- b) is in a range of 1-50 wt %
- c) is in a range of 0.001-1 wt %
- d) is in a range of 0.002-2 wt %
- e) is in a range of 0.01-5 wt %
- f) is in a range of 0.01-5 wt %

Although the prior art of FUMITOSHI discloses more than just one stabilizer, the addition of these compounds is still enabled by the use of term “comprising” and are further enabled by the limitation of instant claim 15.

The phenolic antioxidant of FUMITOSHI satisfies the general formula of the instant invention as depicted in the teachings of the prior art.

Polyolefin resin is depicted in paragraph [0017] and it includes polyethylene and polypropylene among others. The polyolefins include also graft modified polyolefins such as those containing anhydride and carboxylic acid functionality.

FUMIKOSHI further teaches use of photostabilizers such as UV absorbers, HALS which are depicted in paragraph [0045] of the prior art.

Antioxidants are further defined in paragraph [0039-0040] and include phosphite containing antioxidants, which teach antioxidants of the instant claim 8. Processing stabilizer is also mentioned in paragraph [0037-0038].

Filler – is described in paragraph [0020] and includes mineral fillers such as mica. Mica is also utilized in the examples of FUMITOSHI.

The prior art of FUMITOSHI is silent with respect to the particle size of the mica, therefore the teachings of TON THAT are utilized to remedy this deficiency.

The prior art of TON THAT discloses composition comprising polymer and clay nanocomposite.

The clay utilized in TON THAT is nanoclays modified with quaternary ammonium compound. Clay as depicted in col. 5 of TON THAT is selected from swellable clays such as montmorillonite or mica. The modifying agent is an onium compound such as ammonium, phosphonium, oxonium, sulfonium (see col. 6). The amount of clay is 0.2-30 wt % (col. 5).

Polymeric matrix of TON THAT is a thermoplastic polymer or thermosetting polymer as depicted in cols. 6-8 of the prior art. The intercalating polymer of TON THAT is polyolefin that carried epoxy functionalization.

Although the prior art of FUMITOSHI does disclosed mica in its most generic way, one of ordinary skill in the art would understand that mica, which is aluminosilicate, is not compatible with organic polymers. One of ordinary skill in the art would understand the need to modifying mica or any silicate so that its compatibility with polymeric matrix is achieved. The prior art of TON THAT discloses one of the most known ways to modify silicates such as mica, which includes pre-treating the silicate with cationic compound such as ammonium. Such treatment by virtue will result in intercalation of cationic component between silicate platelets, which then undergo cationic exchange rendering clay organophilic. Such treatment eventually upon shear action such as mixing results in complete exfoliation of the silicate layers forming nanoplatelets.

In the light of the above disclosure, it would have been obvious to one having ordinary skill in the art at the time of the instant invention to utilize pre-treated clay of TON THAT in the teaching of FUMITOSHI and thereby obtain the claimed invention. Such combination would produce a nanocomposite, where polymeric matrix is compatible with layered silicate. IN addition the prior art of TON THAT is further evidence, that such silicate would be a good choice in compositions comprising polyolefins and epoxy functionalities.

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski whose telephone number is (571) 272-1127. The examiner can normally be reached on Mon-Thurs 8:30 AM-2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Katarzyna Wyrozebski/  
Primary Examiner, Art Unit 1796  
November 18, 2008